TECHNICAL STABILIZATION PANEL

DECISION DOCUMENT

ATLANTIC WIRE COMPANY

BRANFORD, CT

AUGUST 6, 1993

Revision: 0

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

RCRA STABILIZATION INITIATIVE EXPERT PANEL OUTPUTS

I. FACILITY IDENTIFICATION AND TRACKING INFORMATION

Facility Name and Location: Atlantic Wire Company, Branford CT

RCRA Facility I.D. #:

NCAPS Category:

Date: July 15, 1993

Panel Members: Conrad Leszkiewicz, Catherine Henrich, Patricia Kozak, Michael F. Clark, Richard Doherty

Facilitator: Michael Asselin

Recorder: Susan Zarlengo

II. FACILITY-WIDE STABILIZATION PERFORMANCE STANDARDS OR UNIT-WIDE STABILIZATION OBJECTIVE:

Area of Concern (AOC) No.: 9

AOC Name: NPDES Outfall

Brief description of AOC and Contamination issue:

This NPDES outfall has been in existence from 1966 to present.

Several violations have occurred at the outfall. In September 1988 a discoloration at the outfall was observed. Parameters measured in the outfall were: pH 6.7, BOD 327 mg/l, copper 1.9 ppm, chromium 0.03 ppm, zinc 11 ppm, nickel 0.7 ppm, and lead 0.43 ppm. Other violations occurred in June 1977, August 1979, May 1980, and September 1988. Between 1979 and 1980 a red brown color was observed at the outfall. In 1977 dead ducks were found at the outfall.

The permitted volume of discharge in 1991 was 317,000 gal/day. The discharge entered the tidal flat wetland which is hydraulically connected to the tidal Branford River.

The available files present no sediment sampling results at the discharge point. It is believed no sediment sampling occurred.

There exists a high probability of contamination retention in the form of metals absorption in the tidal wetland sediments.

A. **Describe what might be a reasonably expected performance standard for the stabilization measures:** (e.g., achievement of numerical health based levels, reaching asymptotic reduction in contaminant mass, achieving 90 percent of mass removed, preventing further migration of aqueous plume beyond a certain limit, preventing direct contact with contaminated soils.)

Mitigate contamination of wetlands.

B. **Potential stabilization measures:** (List all of the potential stabilization measures that would be initially applicable to the AOC contamination.)

*1. Excavation/treatment/disposal/recreate wetland.

*2. Clean lines. Note: consultant reported discharge line contained significant amount of contaminated sludge.

3. Extend pipeline into river.

*4. Upgrade treatment system to prevent future discharge problems.

C. **Data Gaps:** (Identify what additional information would be needed to determine the need for stabilization measures and to select the most cost effective stabilization measure.)

1. Collect sediment samples at discharge point.

The panel did not continue the discussion because of the nature of the stabilization measures and lack of data necessary to complete the document.

D. **Rejected stabilization techniques/critical objections:**

Not applicable.

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* represents the panel's favored approaches. These measures are necessary for complete stabilization of this AOC.

E. **Describe the technical components of selected stabilization measure:** (Include any exposure controls, source controls, major stabilization design components and waste/residuals management. Provide the rationale, critical assumptions, technical limitations/uncertainty, expected effectiveness and any special instructions such as the need for permits or additional data.)

Not applicable.

F. **Estimate the time to design the stabilization measures. Estimate the time to construct and complete stabilization:** (Is stabilization quicker to accomplish than probable final corrective measures? Are additional studies needed to assess the feasibility of stabilization alternatives? If so, differentiate between site characterization data and field testing data. Provide the rationale and any critical assumptions and special instructions.)

Not applicable.

G. **Achievement of performance standards:** (Describe how to measure success in achieving the performance standard(s) suggested in II.A. Include the methods, equipment, and measurements necessary for measuring success in achieving the performance standards. Include the rationale for the measurement methods and any critical assumptions and special instructions.)

Not applicable.

H. **Cost estimate:** Provide a cost estimate for the major stabilization components (capital, operation and maintenance). Include any critical assumptions (such as whether overhead is included.)

Not applicable.

I. **Standard Questions:**

1. Are the above stabilization techniques compatible with feasible final remedies? What is the likelihood that the stabilization measures could be the final remedy?

   Not applicable.

2. Describe the risk of the stabilization measures causing the contamination problem to worsen.

   Not applicable.

3. What would be the major concerns if the contamination at the facility were unabated for 5-10 years?

   Not applicable.

4. Will treated wastes meet land disposal restriction standards or will approach rely on a treatability variance?

   Not applicable.

5. What is the expected durability of the selected stabilization measure?

   Not applicable.

J. Brainstorm Discussion: This section will describe panel discussions on related issues/topics to the AOC contamination or discuss "what if" type scenarios posed to the technical expert panel.)

Not applicable.

Area of Concern (AOC) No.: 6

AOC Name: Ferrous Sulfate Waste Pile

Brief description of AOC and Contamination issue:

A ferrous sulfate waste pile is stored on a concrete floor in a structure which has a partial roof, no sides and no berm. It is exposed to the elements. The facility generates approximately 7,600,000 pounds/year of ferrous sulfate.

The pile was tested in June 1990. The following presents selected results: pH 2.4, 182 ppm iron, 9.27 ppm chromium, 7.4 ppm lead, and 1.1 ppm cadmium.

The report mentions the existence of five wells, however, no ground water data was found in files.

A. **Describe what might be a reasonably expected performance standard for the stabilization measures:** (e.g., achievement of numerical health based levels, reaching asymptotic reduction in contaminant mass, achieving 90 percent of mass removed, preventing further migration of aqueous plume beyond a certain limit, preventing direct contact with contaminated soils.)

Not applicable.

B. **Potential stabilization measures:** (List all of the potential stabilization measures that would be initially applicable to the AOC contamination.)

1. The Ferrous Waste pile should be bermed, the roof extended and at least three sides of a structure housing the pile should be erected.

If it is determined after additional sampling, that the ground water and soil are contaminated:

1. Excavate the soils and dispose offsite.

2. Cap area.

3. Pump and treat. This measure would require pretreatment for metals. The following pretreatment methods are feasible:

   - ion exchange
   - precipitation
   - reverse osmosis.

The ground water is saline so conducting reverse osmosis would be the best approach.

Options 1 and 3 are preferred due to the existing saline conditions of the ground water and high ground water table.

C. **Data Gaps:** (Identify what additional information would be needed to determine the need for stabilization measures and to select the most cost effective stabilization measure.)

1. Collect and analyze ground water and soil samples for ferrous sulfate.

The panel did not continue the discussion due to lack of data.

D. **Rejected stabilization techniques/critical objections:**

Not applicable.

E. **Describe the technical components of selected stabilization measure:** (Include any exposure controls, source controls, major stabilization design components and waste/residuals management. Provide the rationale, critical assumptions, technical limitations/uncertainty, expected effectiveness and any special instructions such as the need for permits or additional data.)

Not applicable.

F. **Estimate the time to design the stabilization measures. Estimate the time to construct and complete stabilization:** (Is stabilization quicker to accomplish than probable final corrective measures? Are additional studies needed to assess the feasibility of stabilization alternatives? If so, differentiate between site characterization data and field testing data. Provide the rationale and any critical assumptions and special instructions.)

Not applicable.

G. **Achievement of performance standards:** (Describe how to measure success in achieving the performance standard(s) suggested in II.A. Include the methods, equipment, and measurements necessary for measuring success in achieving the performance standards. Include the rationale for the measurement methods and any critical assumptions and special instructions.)

Not applicable.

H. **Cost estimate:** Provide a cost estimate for the major stabilization components (capital, operation and maintenance). Include any critical assumptions (such as whether overhead is included.)

Not applicable.

I. **Standard Questions:**

1. Are the above stabilization techniques compatible with feasible final remedies? What is the likelihood that the stabilization measures could be the final remedy?

   Not applicable.

2. Describe the risk of the stabilization measures causing the contamination problem to worsen.

   Not applicable.

3. What would be the major concerns if the contamination at the facility were unabated for 5-10 years?

   Not applicable.

4. Will treated wastes meet land disposal restriction standards or will approach rely on a treatability variance?

   Not applicable.

5. What is the expected durability of the selected stabilization measure?

   Not applicable.

J. **Brainstorm Discussion:** This section will describe panel discussions on related issues/topics to the AOC contamination or discuss "what if" type scenarios posed to the technical expert panel.)

Not applicable.

Area of Concern (AOC) No.: 2 and 3

AOC Name: Small cleaning house and large cleaning house

Brief description of AOC and Contamination issue:

These two AOCs were combined as one since they have similar contamination problems. The small cleaning house (AOC #2) probably has more contamination problems than the large cleaning house (AOC #3) because AOC #2 has a brick and concrete floor in poor condition. AOC #3 has a cracked concrete floor. Both cleaning houses have evidence of staining of floors and around vats.

The cleaning houses are located approximately 250 feet from the tidal flat wetland, and the river is next to the wetland.

AOC #2 houses such chemicals as muriatic acid, potassium permanganate, copper, lime, and flash liquor. There is significant storage capacity; 3,000 gallons of muriatic acid (tank), 1,800 gallons of potassium permanganate etc.

AOC #3 houses such chemicals as sulfuric acid, lime, phosphate, and potassium permanganate. A 16,000-gallon tank storing sulfuric acid is located here. This cleaning house has been in operation since 1906. The floor is sloped and should a spill occur, the spill would flow out the door.

There is a potential for soil and ground water contamination under the cleaning houses. No ground water/soil data were found in the files.-

A. **Describe what might be a reasonably expected performance standard for the stabilization measures:** (e.g., achievement of numerical health based levels, reaching asymptotic reduction in contaminant mass, achieving 90 percent of mass removed, preventing further migration of aqueous plume beyond a certain limit, preventing direct contact with contaminated soils.)

Not applicable.

B. **Potential stabilization measures:** (List all of the potential stabilization measures that would be initially applicable to the AOC contamination.)

1. Ground water interceptor trench. This is a passive system. Treatment of the ground water would depend on the pH of the water.

2. Seal/replace floors and troughs. Replacement preferred over sealing because it would be more effective.

Note: general housekeeping improvement is needed; the facility needs to clean up the scrap metal and other debris stored on the grounds, and should have a system in place for cleaning up spills.

C. **Data Gaps:** (Identify what additional information would be needed to determine the need for stabilization measures and to select the most cost effective stabilization measure.)

1. Collect soil and ground water samples under building by coring through the floor.

2. Characterize the extent of the contamination (if the analytical data show a contamination problem).

3. Characterize hydrogeology.

Note: Acids, low pH of ground water, might mobilize metals in ground water. However, saline conditions in ground water could act as a buffer to minimize metal migration.

D. **Rejected stabilization techniques/critical objections:**

1. Ground water interception. Rejected because sheet piling would be necessary on the river side of the shallow interceptor trench.

2. Slurry wall. Rejected because of the high salinity, acidity of the ground water.

3. Up take wells. Rejected because this option would not be as effective as the interceptor trench. The interceptor trench would be more passive and achieve interception of the majority of the contamination.

The panel did not continue the discussion because of lack of data.

E. **Describe the technical components of selected stabilization measure:** (Include any exposure controls, source controls, major stabilization design components and waste/residuals management. Provide the rationale, critical assumptions, technical limitations/uncertainty, expected effectiveness and any special instructions such as the need for permits or additional data.)

Not applicable.

F. **Estimate the time to design the stabilization measures. Estimate the time to construct and complete stabilization:** (Is stabilization quicker to accomplish than probable final corrective measures? Are additional studies needed to assess the

feasibility of stabilization alternatives? If so, differentiate between site characterization data and field testing data. Provide the rationale and any critical assumptions and special instructions.)

Not applicable.

G. **Achievement of performance standards:** (Describe how to measure success in achieving the performance standard(s) suggested in II.A. Include the methods, equipment, and measurements necessary for measuring success in achieving the performance standards. Include the rationale for the measurement methods and any critical assumptions and special instructions.)

Not applicable.

H. **Cost estimate:** Provide a cost estimate for the major stabilization components (capital, operation and maintenance). Include any critical assumptions (such as whether overhead is included.)

Not applicable.

I. **Standard Questions:**

1. Are the above stabilization techniques compatible with feasible final remedies? What is the likelihood that the stabilization measures could be the final remedy?

   Not applicable.

2. Describe the risk of the stabilization measures causing the contamination problem to worsen.

   Not applicable.

3. What would be the major concerns if the contamination at the facility were unabated for 5-10 years?

   Not applicable.

4. Will treated wastes meet land disposal restriction standards or will approach rely on a treatability variance?

   Not applicable.

5. What is the expected durability of the selected stabilization measure?

Not applicable.

J. Brainstorm Discussion: This section will describe panel discussions on related issues/topics to the AOC contamination or discuss "what if" type scenarios posed to the technical expert panel.)

Not applicable.

Atlantic Wire Co

AOCs → #9, #6, #2, #3

AOC #9; NPDES Outfall – 1966 – Present

Violations → Sept 88 → discoloration of pH 6.7

BOD 327 mg/L
Copper 1.9 ppm
Chromium .03 ppm
Zinc 11 ppm
Nickel 0.7 ppm
Lead .43 ppm

79–80 – Red Brown Discharges

77 – Dead Ducks

Volume of Discharge – 1991
317,000 gals/day

(1) Discharge Violations

Other
Jun 77
8/79
5/80
9/88

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AOCs → #9 (Cont.)

Discharge into tidal flat wetland which connects to the Branford River.

Data Gap — No sediment sampling at discharge point. ← Needed

Note: Active

High Probability of contam. retention in the tidal wetland — sediment adsorption of metals

Assumption — problem (metals in sediment)

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(3)

AOCs → #9 (Cont.)

Stab. Options → * ① Excavation / Treatment / Disposal / Recreate wetland

* ② Clean line; Note: consultant reported discharge contained significant amount of contaminated sludge.

③ Extend pipeline into river if future problems are anticipated — River dilution minimize Environ exposure

* ④ Upgrade Treatment system to prevent future discharge problems

* Favored Stab. approaches — Do 1, 2 & 4

Atlantic Wire Co

(4)

AOC #6

Past Observations – Dump of ground

Ferris Sulfate – Waste pile (7,600,000 lbs/yr) ← No Berm concrete pad

Problem / Issue → Exposure to elements – Partial Roof + No sides

June 1990 → Testing of waste pile → pH 2.4, iron 182 ppm Chromium 9.27 ppm

lead 7.4 ppm, Cadium 1.1 ppm

1976 – waste

No Ground Water Data in files. – Mention of 5 wells

Data Gap → GW + Soil Samples, (Assume is problem)

Stabilization Options → ① Waste pile should be bermed + roof extended + at least 3 sides.

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AOC #6 – Stab Options (Cont.)

If GW/soil problem—

* ① Excavate soils / Disposal
② Cap
* ③ Pump + Treat → metal treatment
  - Ion Exchange
  - Precipatation
  - Reverse Osmosis

GW is saline, so prefer →

Options ① + ③ Preferred.

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AOC #2 – Small Cleaning House
#3 – Large Cleaning House
} Similar Problem

#2 – probably worst than #3, due to a brick and concrete floor in #2 and a concrete floor in #3.

#2 – Muratic Acid
Potassium Permanganate
Copper
Lime
Flash Liquor

#3 – Sulfuric Acid
Lime
Phosphate
Potassium Permanganate

- operation since 1906
- Spills on floor which cracked.
- in Bldg #3 – spills could flow out of the door.

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(7)

Significant storage — in both buildings

#2 → 3000 gals of Muratic Acid at any given time
1800 gal potassium permanganate
etc
↓

Alot of staining on floor, + edge of mats
floors in poor condition → cracks

#3 → 16,800 gal sulfuric acid
etc
↓

Bldgs — still in use

Probable Problem with contamination under bldgs. — No GW data/soil data found

Assume there is a problem → Data Gaps → Sampling under bldg./coring through floor → soil + GW

Atlantic Wire Co

If found contam → Need to expand sampling to define extent of the problem. Need to define hydrology.

Acids (low pH) → might mobilize metals in GW; on other hand saline conditions in GW could act as buffer to minimize metal migration.

GW Intercept Concept → ~~rejected~~ due to high acidic or saline conditions

Sheet Piling / ~~slurry wall~~ probably needed on river side of ~~up-take wells~~ shallow interceptor trench.

(250' to tidal flat wetland river next to wetland)

GW Treatment Concept → depend on pH of the intercept water

trench would be more passive + achieve interception of majority of contam.

Atlantic Wire —
AOC #2 + #3

Stab Options (Cont.) —

— Seal / Replace floors + troughs
(Replacement preferred — more effective)

— General Housekeeping Improvement Needed
- Operation Spillage
- Scrap metal lying around

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

September 26, 1995

Atlantic Wire Company
1 Church Street
Branford, CT 06405

To Whom It May Concern:

I am writing to clarify for you a recent change in the United States Environmental Protection Agency (EPA) policy regarding the "Deferred" decision for Atlantic Wire Company located at 1 Church Street in Branford, Connecticut (EPA Identification Number: CTD001161181).

The Atlantic Wire Company site was deferred to the EPA Resource Conservation and Recovery Act (RCRA) Subtitle C program on July 2, 1992. A search of our files does not show that you, as a owner, operator or other interested party, were ever notified of that decision. The purpose of this letter is to provide you with formal notification of EPA's decision.

The deferral decision means that no further work is anticipated at this site by the federal Superfund Site Assessment program. Sites receive a "Deferred" decision when the federal Superfund Site Assessment program has completed it's assessment of a site, and has determined that no further steps will be taken to list a site on the National Priorities List (NPL or "Superfund List"), because the site is being addressed under RCRA Corrective Action authorities.

Sites deferred to the RCRA Subtitle C program are removed from the federal Superfund program's inventory of known and suspected hazardous waste disposal sites (the Comprehensive Environmental Response, Compensation and Liability Information System or CERCLIS database). They are archived as historical records to ensure that these investigations are not needlessly repeated in the future.

Deferred sites are also subject to state jurisdiction, and further actions may be required at this site by the state. You may wish to contact the state to verify the status of your property with regard to state authorities. The contact for the Connecticut Department of Environmental Protection is Doug Zimmerman, who may be reached at (203) 424-3800.

Finally, "Deferred" decisions may be changed based upon new information or other considerations which make a recommendation for listing appropriate at a later time. In such an instance, you will be notified and the site will be returned to the CERCLIS database with the "Deferred" decision removed.

For further information regarding the status of this site under the RCRA Subtitle C program, please contact Ernie Waterman, who may be reached at (617) 223-5511. If you have any questions regarding the removal of this site from the CERCLIS inventory, I may be reached at (617) 223-5524.

Sincerely,

Daria Dilaj
Site Assessment Manager
Waste Management Division

cc: Doug Zimmerman, CT DEP
Ernie Waterman, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

MAR 1 - 1993

NAME: Atlantic Wire
I.D. NO.: CTD001161181
FILE LOC: R-5
OTHER:

John Strazemski
Atlantic Wire Co
1 Church Street
Branford, CT 06405

Dear Mr. Strazemski:

In July of 1990, the National RCRA Implementation Study recommended that national guidance be developed to ensure consistency among regional offices in setting priorities. To deal with our RCRA corrective action responsibilities, the Environmental Protection Agency developed the National Corrective Action Prioritization System (NCAPS).

Since August 1991 Region I of the Environmental Protection Agency has been working on evaluating the potential risk posed by all RCRA Treatment, Storage and Disposal facilities in the Region using NCAPS. (The attached fact sheet provides a brief overview of this system). The final outcome of this evaluation is a ranking for each facility as a high, medium, or low significance facility.

These rankings will be used as a tool in prioritizing the order in which facilities are considered for corrective action, with high significance facilities generally being addressed first. However, after considering other relevant factors such as facility compliance history or the requirements of existing permits, EPA may elect to work on high, medium and low facilities in any order. Factors which will lead EPA to consider a medium or low significance facilities ahead of high significance facilities include such considerations as the requirements of existing permits and facility compliance history. The decision to require corrective action at a given facility will be based on the site specific information underlying the ranking and site specific circumstances.

As of August 24, 1992 the Atlantic Wire Co facility (RCRA ID# CTD001161181) located in Branford was ranked as a High significance facility.

If you have any questions on the ranking process, how the ranking will be used, or the ranking of your facility please contact me at (617) 573-9680.

Sincerely,

John Podgurski, Chief
CT Waste Regulation Section

cc: George Dews, CT DEP